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1917

ANNUAL REPORT

OF THE DIRECTORS OF

MERICAN TELEPHONE AND TELEGRAPH COMPANY

TO THE STOCKHOLDERS
FOR THE YEAR ENDING
DECEMBER 31, 1917

NEW YORK, 1918

American Telephone and Telegraph Company

JANUARY 1, 1918

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REPORT OF THE DIRECTORS OF AMERICAN TELEPHONE AND TELEGRAPH COMPANY.

New York, March 11, 1918.

To the Stockholders:

Herewith is respectfully submitted a general statement covering the business of the American Telephone and Telegraph Company and its associated companies—the Bell System, exclusive of independent connecting companies—followed by the report of the American Telephone and Telegraph Company, for the year 1917.

Combining the accounts and excluding all duplications and inter-company matters—including interest, dividends and other payments to the American Telephone and Telegraph Company by the associated companies—the actual operations of the service, the actual revenues and expenses, are thereby shown.

BELL TELEPHONE SYSTEM IN THE UNITED STATES.

TELEPHONE COMPANIES AND SUBSCRIBER STATIONS.

The Bell System, as a whole, is made up of the American Telephone and Telegraph Company and associated and connecting companies. The associated, or Bell companies are Bell companies by virtue of contract or license arrangements and financial relations. The connecting companies are independent companies, operating in territory dependent upon them for service, connecting with the Bell companies. Besides the separate systems making up the Bell System, there are many independent companies covering, partially or completely, large areas of territory, operating independently of, not connecting with the Bell companies.

There are in the United States approximately 11,200 separate companies giving telephone service. Of them 37 are Bell companies, 9,129 independent companies connecting with the Bell System, and about 2,000 independent companies not connecting with the Bell System. There are also a large number of rural lines and systems which connect with these companies, 22,299 of which are connected with the Bell System.

At the end of the year the number of telephone stations which constituted the Bell System in the United States was 10,475,678, an increase during the year of 628,486, of which increase 486,040 were owned by the Bell companies and 142,446 were Bell connected stations. Of the total number of stations in the system 7,031,530 were owned and operated by Bell companies and 3,444,148 by local, co-operative and rural independent companies or associations having sublicense or connection contracts; the so-called connecting companies.

In addition to these there are about 1,300,000 stations operated by independent companies not connected with the Bell System.

THE WIRE SYSTEM.

The total mileage of wire in use for the exchange and toll service of the Bell companies, not including connecting companies, was at the end of the year 22,610,487 miles, of which 2,760,172 were added during the year. Of the total mileage 19,521,679 miles were exchange wires and 3,088,808 miles were toll wires. Ninety-four per cent. of the total wire mileage is copper wire. 13,451,121 miles, or 59 per cent. of the mileage, including 964,899 miles of toll wires, is in underground cables, and this percentage is steadily increasing. The underground conduits represent a cost of $110,500,000 and the cables in the conduits $144,100,000, a total in underground plant of $254,600,000.

Attention was called last year to the mileage of "phantom circuits." During 1917, 59,022 miles of "phantom circuits" were added, making 281,016 miles of these "phantom circuits" at the end of the year.

The wire mileage owned and operated by connecting companies is not included in any of these figures. The approximate mileage of connecting companies' toll wires is 410,000 miles, which added to the 3,088,000 miles of toll wires operated by the Bell companies, makes a total of nearly 3,500,000 miles of such wires bringing together in one comprehensive, inter-communicating system all the cities and towns and practically all of the rural communities throughout the United States.

TRAFFIC.

Including the traffic over the toll and long-distance lines, but not including connecting companies, the daily average of toll connections was about 1,009,000, and of exchange connections about 30,845,000, as against corresponding figures in 1916 of 890,000 and 28,530,000; the total daily average for 1917 reaching 31,854,000, or at the rate of about 10,600,000,000 per year. This is an average of approximately 100 calls per year for every man, woman and child in the United States.

PLANT ADDITIONS.

The net amount added to plant and real estate by all the companies, excluding connecting companies, constituting our system in the United States during the year 1917 was $118,599,462, distributed as follows:

Real Estate	$13,770,614	
Equipment	28,029,466	
Exchange Lines	41,565,583	
Toll Lines	25,834,824	
Construction Work in Progress, etc.	9,398,975	
		$118,599,462

PLANT ADDITIONS OF PREVIOUS YEARS.

The net amounts added in eighteen years have been as follows:

1900	$31,619,100	1909	$ 28,700,100
1901	31,005,400	1910	53,582,800
1902	37,336,500	1911	55,660,700
1903	35,368,700	1912	75,626,900
1904	33,436,700	1913	54,871,900
1905	50,780,900	1914	50,045,300
1906	79,366,900	1915	32,863,700
1907	52,921,400	1916	66,224,700
1908	26,637,200	1917	118,599,500

making a total for the eighteen years of $914,648,400.

MAINTENANCE, DEPRECIATION AND RECONSTRUCTION.

Particular attention is asked to this statement. Statements have been circulated to the effect that the Bell companies had neither fully maintained their property nor set aside from revenue the usual allotments for reconstruction. The following figures are a complete refutation of such statements.

During the year $94,071,000 was applied out of revenue to current maintenance and depreciation, an increase of $9,515,000 as compared with 1916. Current maintenance increased $6,227,000, averaging 4.3 per cent. on the average plant in service, which compares with 3.9 per cent. in 1916.

The provision for depreciation of plant during the year was $52,919,000, an average of 5.5 per cent. of the cost of plant, and an increase over 1916 of $3,288,000.

Plant which originally cost about $43,000,000, but which had reached its limit of serviceable life, was removed and replaced by new and improved construction, or sold, as compared with $44,000,000 in 1916. After deducting this amount less salvage from the provision for depreciation, the balance, about $33,000,000, increases the reserves for such depreciation and obsolescence, which must be provided for out of current expenses, but cannot be currently determined or expended.

GROWTH AND PROSPECTS.

The continued and unprecedented business activity of the country during the past year has thrown on the Bell System a heavy burden of traffic, taxing our facilities to the utmost and necessitating the rapid increase of those facilities which is indicated by the statistics.

It was stated in last year's report that we would carry on the work of new construction at an unprecedented rate during the year, the plans contemplating additions to plant aggregating about $90,000,000. The actual additions, as shown elsewhere, however, amounted to more than $118,000,000, larger than for any previous year by nearly 50 per cent. Subscribers' stations increased by 486,000.

The continued policy of the Bell System of constructing *in advance* of requirements, partly to provide for emergencies, and for economical reasons, has again justified itself many times over during the year. In consequence of the absorption of much of the surplus plant into the service last year, the new construction during the current year was to meet the immediate needs of the service, and as far as possible restore the normal surplus. Great difficulties were met in securing the necessary raw materials, supplies and adequate transportation; there was a large increase in the cost of labor and materials; there was necessary to meet the emergency a large toll line construction; all contributing to the increase of the average investment per station from $146 to $153.

It is difficult to estimate what additions will be made to the plant during 1918. Plans have been made aggregating $90,000,000. This is believed to be the maximum requirement; the probabilities are that much less will be expended. The Government's desire for the conservation of men, material and money for direct war requirements and the difficulties of transportation because of priority orders and freight embargoes, make the exact determination of the program impossible.

The demands of the Government in time of necessity are paramount, but the Administration and all its officials recognize the importance, both to the Government and the public, of an efficient service, and will co-operate with the companies in their efforts to maintain regular service. We are confident of being able to meet necessary demands and maintain existing conditions.

OPERATING RESULTS.

The American Telephone and Telegraph Company and associated companies constitute one operating entity, and to understand or correctly determine the actual costs and charges of the telephone service and the ultimate distribution of the revenue, their accounts must be consolidated.

The following tables show the business for the year of the Bell Telephone System including the American Telephone and Telegraph Company and its associated holding and operating companies in the United States, but not including connecting independent or sub-licensee companies, or the Western Electric Company, Inc., except as investments in and dividends from those companies are included respectively in assets and revenue. All inter-company duplications are eliminated in making up these tables so that the figures represent the business of the system as a whole in its relations to the public.

The statement of earnings and expenses is presented in the form called for by the Interstate Commerce Commission's accounting system. In round figures the total operating revenues of the Bell System were $294,900,000, an increase of $30,300,000 or 11.5 per cent. over last year. Of these revenues depreciation and maintenance consumed $94,071,000, an increase of $9,515,000 over 1916 or 11.3 per cent.; traffic expenses consumed $68,122,000,

Bell Telephone System in United States.

COMPARISON OF REVENUE AND EXPENSES, 1916 AND 1917.

(ALL DUPLICATIONS INCLUDING INTEREST, DIVIDENDS AND OTHER PAYMENTS TO AMERICAN TELEPHONE AND TELEGRAPH COMPANY BY ASSOCIATED COMPANIES ARE EXCLUDED.)

	1916.	1917.	Increase.
Exchange Revenues........	$188,888,149	$207,471,937	$18,583,788
Toll Revenues.............	72,971,668	84,559,861	11,588,193
Miscellaneous Revenues.....	2,715,463	2,863,152	147,689
Total Operating Revenues	$264,575,280	$294,894,950	$30,319,670
Depreciation...............	$ 49,631,966	$ 52,919,458	$ 3,287,492
Current Maintenance.......	34,923,549	41,151,041	6,227,492
Traffic Expenses...........	53,748,707	68,121,646	14,372,939
Commercial Expenses.......	25,698,913	28,364,039	2,665,126
General and Miscellaneous Expenses..................	11,902,470	13,849,960	1,947,490
Total Operating Expenses	$175,905,605	$204,406,144	$28,500,539
Net Operating Revenues.	$ 88,669,675	$ 90,488,806	$ 1,819,131
Uncollectible Revenues......	$ 1,480,502	$ 1,229,253	$ 251,249*
Taxes....................	14,916,448	20,710,933	5,794,485
Operating Income......	$ 72,272,725	$ 68,548,620	$ 3,724,105*
Net Non-Operating Revenues	7,080,384	7,975,869	895,485
Total Gross Income.....	$ 79,353,109	$ 76,524,489	$ 2,828,620*
Rent and Miscellaneous Deductions................	$ 3,735,470	$ 3,990,047	$ 254,577
Interest Deductions........	18,378,931	21,820,231	3,441,300
Total Deductions.......	$ 22,114,401	$ 25,810,278	$ 3,695,877
Balance Net Income....	$ 57,238,708	$ 50,714,211	$ 6,524,497*
Deduct Dividends.........	35,160,119	36,862,582	1,702,463
Surplus Earnings.	$ 22,078,589	$ 13,851,629	$ 8,226,960*

*Decrease.

an increase of $14,373,000 or 26.7 per cent.; commercial expenses, $28,364,000, an increase of $2,665,000 or 10.4 per cent.; general and miscellaneous expenses, $13,850,000, an increase of $1,947,000 or 16.4 per cent.; taxes assignable to operations, in which provision is made for the estimated amount of federal income and excess profits taxes payable in 1918, $20,711,000, an increase of $5,795,000 or 38.9 per cent.

Including $475,000 taxes not assignable to operations the total taxes were $21,186,000, which is 2.31 per cent. on the outstanding capital obligations. There were net non-operating revenues of $7,976,000, made up chiefly of interest, dividends and rents received less taxes and minor expenses connected therewith. The "total gross income," using the term officially provided by the Interstate Commerce Commission, was $76,524,000, a decrease of $2,829,000 or 3.6 per cent. under 1916. Out of this $25,810,000 was paid for interest, rents, etc., leaving $36,862,000 for dividends and $13,852,000 to be carried into surplus.

The total capitalization, including inter-company items and duplications but excluding reacquired securities of the companies of the Bell System, is $1,612,552,575. Of this, $695,176,153 is owned and in the treasury of the companies of the Bell System, and is represented to the public by the outstanding securities of the American Telephone and Telegraph Company and associated companies.

The capital stock, bonds and notes payable of the Bell System *outstanding in the hands of the public at the close of the year were* $917,376,422, of which the outstanding securities of the American Telephone and Telegraph Company represent $626,412,025, and outstanding securities of the associated companies in the hands of the public represent $290,964,397.

If we consider the current accounts payable, $46,382,252, against which there were liquid assets, cash and

BELL TELEPHONE SYSTEM IN UNITED STATES.

COMBINED BALANCE SHEETS, 1916 AND 1917.

(DUPLICATIONS EXCLUDED.)

ASSETS:	Dec. 31, 1916.	Dec. 31, 1917.	Increase.
Telephone Plant........	$ 946,293,248	$1,064,892,710	$118,599,462
Supplies, Tools, etc....	24,032,099	31,543,745	7,511,646
Receivables...........	66,029,580	42,472,942	23,556,638*
Cash.................	80,692,829	35,986,840	44,705,989*
Stocks and Bonds......	81,815,476	101,607,231	19,791,755
Total..............	$1,198,863,232	$1,276,503,468	$ 77,640,236
LIABILITIES:			
Capital Stock..........	$ 463,101,569	$ 505,403,777	$42,302,208
Funded Debts.........	422,586,617	407,434,080	15,152,537*
Bills Payable..........	3,738,451	4,538,565	800,114
Accounts Payable......	38,280,436	46,382,252	8,101,816
Total Outstanding Obligations.......	$ 927,707,073	$ 963,758,674	$36,051,601
Employees' Benefit Fund	9,151,000	9,219,143	68,143
Surplus and Reserves...	262,005,159	303,525,651	41,520,492
Total..............	$1,198,863,232	$1,276,503,468	$77,640,236

*Decrease.

current accounts receivable, of $78,459,782, or an excess of $32,077,530 to the credit of the system, it leaves *as the net permanent capital obligations* of the whole system outstanding in the hands of the public $885,298,892.

A number of appraisals of our properties in the various cities and states have been made by public authorities practically all of which have appraised the value of the properties for rate-making purposes greater than the amounts carried on our books.

The telephone plants stand on the books of the companies at $1,064,892,710, as of December 31, 1917, a net increase during the year of $118,599,462, after deducting all plant withdrawn from service, sold or abandoned. Stocks and bonds owned increased during the year $19,791,755. Supplies, tools, etc., increased $7,511,646. Receivables decreased $23,556,638. Cash balances decreased $44,705,989.

The increase in total assets of $77,640,236 is represented by $36,051,601 increase in outstanding obligations of the whole system and an increase in surplus and reserves of $41,588,635.

In accordance with our previous practice in making up the combined figures for the Bell System, all inter-company items have been eliminated, and all intangible assets have been excluded, so that the combined surplus and reserves as shown above are considerably less than the sum of surplus and reserves shown on the books of the separate companies.

The surplus and reserve, aggregating $303,500,000, is invested in productive property, the revenue from which, being free from capital charges, is subject only to operating charges, and in this way reduces the cost of the service. It is also a provision against abnormal depreciation or obsolescence.

AVERAGE OPERATING UNITS.

(See table on page 13.)

The table on page 13 shows average operating revenue and expenses per station, operating ratios, unit plant cost, etc., of the Bell Telephone System for the years 1895, 1905, 1915, 1916 and 1917.

It will be observed that both average earnings and average expenses per station which now vary slightly from year to year are very much less than in earlier years. The average expenses per station have been reduced, in spite of improved wages and increased taxes, by improved methods and greater efficiency in every branch of the service.

The decrease—from $71.91 in 1895 to $30.62 in 1917—in the *average rate of exchange earnings per station,* is largely the result of "measured service," which places the system within the reach of the many who can afford to pay for actual service, but would not, possibly could not pay, and

AVERAGE OPERATING UNITS OF BELL TELEPHONE SYSTEM IN UNITED STATES (INCLUDES AMERICAN TELEPHONE AND TELEGRAPH CO.)

Average per Exchange Station.

EARNINGS:	1895.	1905.	1915.	1916.	1917.
Exchange Service	$ 71.91	$ 33.86	$ 29.73	$ 30.49	$ 30.62
Toll Service	16.43	13.21	11.04	11.75	12.45
Total	$ 88.34	$ 47.07	$ 40.77	$ 42.24	$ 43.07
EXPENSES:					
Operation	$ 28.84	$ 16.77	$ 14.83	$ 15.26	$ 16.74
Taxes	2.87	1.70	2.30	2.44	3.12
Total	$ 31.71	$ 18.47	$ 17.13	$ 17.70	$ 19.86
Balance	$ 56.63	$ 28.60	$ 23.64	$ 24.54	$ 23.21
Maintenance and Depreciation	$ 27.73	$ 14.66	$ 13.34	$ 13.67	$ 13.91
Net Earnings	$ 28.90	$ 13.94	$ 10.30	$ 10.87	$ 9.30
Per Cent. Operation Expense to Telephone Earnings	32.6	35.6	36.4	36.1	38.9
Per Cent. Telephone Expense to Telephone Earnings	67.3	70.4	74.7	74.3	78.4
Per Cent. Maintenance and Depreciation to Average Plant, Supplies, etc.	9.1	8.5	8.8	9.2	9.3
Per Cent. Increase Exchange Stations*	15.7	24.5	6.9	9.7	7.4
Per Cent. Increase Miles Exchange Wire*	15.9	27.2	6.7	6.9	13.7
Per Cent. Increase Miles Toll Wire*	19.5	12.8	.6†	9.4	15.1
Average Plant Cost Per Exchange Station (Exchange and Toll Construction)	$300.00	$164.00	$149.00	$146.00	$153.00
Average Cost Per Mile of Toll Wire (including Poles and Conduits)	$ 85.00	$ 69.00	$ 74.00	$ 72.00	$ 71.00
Per Cent. Gross Telephone Earnings to Average Plant	28.4	27.5	27.2	29.2	29.9
Per Cent. Total Net Earnings to Average Capital Obligations	13.12	8.87	8.24	9.12	8.03
Per Cent. Total Net Earnings to Average Plant and Other Assets	7.70	7.23	6.37	6.70	5.86
Per Cent. Paid Out on Average Capital Obligations	8.62	6.14	6.35	6.46	6.50
Per Cent. Paid Out on Average Plant and Other Assets	5.06	5.00	4.91	4.74	4.74

* Increase during year shown, over previous year.

† Small increase mainly due to increase in radius covered by exchange rates.

in any case should not be called on to pay for more than their own service, or to pay any rate based on average use. Average use is very greatly increased because of the very large use made by some. The best and most complete answer to the demands for flat rates is that 75 per cent. of the total subscribers of the Bell System pay less than the average rate for their telephone service. Any method of charge which does not call upon the large users for their proportion of the cost caused by their use is unjust to the great mass of subscribers.

Particular attention is again directed to the percentage of net earnings and of dividend and interest disbursements of the Bell Telephone System to total plant and other assets; also of taxes paid to the public:

Percentage of net earnings to plant and other assets	5.86
Percentage of charges paid on capital to plant and other assets	4.74
Percentage of taxes paid to public to plant and other assets	1.71

These percentages of earnings and charges compare with 6.70 per cent. and 4.74 per cent. in 1916.

READJUSTMENTS.

During the year there has been a very general readjustment of salaries and increase in the number of operators to meet the necessary demands. The increase in operating expenses reflects the increase in both the number of operators and the readjustment of compensation to meet present conditions of living and work. It takes time to provide skilled employees. They have to be educated. It takes time to create facilities. The increase in work came so rapidly in 1916 that surplus facilities were fully employed, and our regular employees overworked. During the same year our increased earnings were larger than increased expenses. This was reflected in the companies' surplus for the year, and a liberal distribution was made to the employees. The expenses during the past year more than overcame increased earnings and the increase in the expenses was due in a large part to increases in regular wages.

It is the intention of the Bell System to distribute in regular wages to its employees, their full proportion of the revenue it is allowed to collect, the maximum that is being paid by others for similar services and such an amount as will secure the very best class of employees.

There is no utility so dependent upon the service rendered by the employees as is this. There is no service rendered by any corporation which is so exacting. It is largely a personal service rendered by each employee to each individual. Much depends upon the employee. When a connection is asked for, it is important, at least in the mind of the individual asking. Delay irritates, and anything which seems to be indifference or inattention on the part of the employees more than irritates. This is intensified by the fact that although the relation is personal, it is carried on at a distance out of sight, and also that no one person engaged in the co-operative process required for the telephone connection can always know or fully understand the difficulties or obstructions occurring at other points.

It is necessary that the service required of the employee shall not overtax physically or mentally, and that the working conditions and opportunities for relaxation shall be of the best. Every effort has been made to create such conditions and make the work as attractive and pleasant as any continuous work can be. It is also necessary that the control of the operating organization shall be absolutely under the authority of the company which is responsible for the service, and it is obligatory on the part of the company to see that such authority shall not be abused and that every employee has immediate and free access to higher authority in case of any real or fancied grievance.

This policy has worked very satisfactorily and there has been relatively little trouble with our employees, and what there has been has been the outgrowth of local conditions rather than a result of any grievance or dissatisfaction on the part of the employees with their work.

VALUE OF PROPERTY OF THE BELL COMPANIES.

In view of the many derogatory statements which have been circulated through carelessness or intention, we think it is our duty to reassure our shareholders; we wish to impress upon them the value and security of their holdings. No one can forecast the future, but based on an intimate knowledge of the past, it is within limits to say that there is as much reason for confidence now as there has been. Our business is growing, the public is friendly, the decisions of the boards of control and regulation without exception have been intended to be fair, and have been acceptable if not always entirely to our satisfaction. Our plant has been maintained at the highest state of efficiency.

Our obsolescence has in great part been taken care of in our maintenance, all of it in our maintenance and reconstruction, and there is a large and increasing reserve against any emergency. We have allotted to these items as liberally as in the past years, and yet in this year of unusual expense our surplus, while not quite equal to previous years, shows a safe margin over all.

Our shareholders have paid to the Company in premiums about $35,000,000 in excess of par for their capital stock.

The minimum replacement value of our property, exclusive of intangibles, is far in excess of the book value, and intangibles represent expenditure and have value. Actual appraisals are continually being made by boards of control, municipal and other rate-making bodies for ratefixing purposes. They are made by independent appraisers who certainly have no interest in over-valuation. In every case the appraisals have demonstrated the conservatism of the book value.

The book value of the plant and other assets of the Bell System as a whole, exclusive of intangibles, is over three hundred millions in excess of the outstanding obligations; or a surplus amounting to much over one-half of the share capital obligations outstanding, inclusive of American Telephone and Telegraph Company's and other Bell companies' share capital in the hands of the public.

WESTERN ELECTRIC COMPANY, INCORPORATED.

The business of the Western Electric Company, Inc., has, of course, reflected the policy of its principal customers. At the beginning of the year the Bell Telephone System was, without sparing cost, extending its plant to meet the phenomenal demands of general business, and the consequent demand for Western Electric products exceeded all previous records.

When it became probable that this country would become involved in the great war, the Bell System, in preparation for extraordinary service demands which would come in such a contingency, directly and indirectly, from the various departments of the Government, commenced a systematic restraint of station growth. That naturally affected adversely a certain portion of the Western Electric business. Later (in July) it appeared to us that we should do our part to conserve the resources of the country which would be required for war purposes and we decided to limit construction and reconstruction which would use lead, copper and other materials and likewise man power, to such work as would further military preparations. This cut down materially another part of the Western Electric product.

With this came the setting aside of its program on central office work and a substitution in its place of emergency requirements for camps, cantonments, etc., so that during the year the company has been meeting a variety of changes in requirements which will probably affect its earnings. It has, however, been successful in adjusting itself rapidly to changing conditions and in giving us what the changing conditions have required. It has, of course, put its great facilities in the way of development and experimentation as well as of manufacturing at the command of the Government.

EMPLOYEES' BENEFIT FUNDS.

The Plan for Employees' Pensions, Disability Benefits and Death Benefits has now been in operation throughout the Bell System for five years. Under this plan, which has been described in previous reports, the companies bear the entire cost of pensions on account of old age, of benefit payments in cases of sickness or death and of compensation in cases of accident. The period of heavy traffic under difficult conditions which has been experienced during the past year has furnished a further demonstration of the value to the telephone service of these and other provisions which have been made by the Bell System for the welfare of employees, while the trend of public opinion continues to support our belief that these provisions are no more than justice to the men and women who are devoting their working lives to the telephone service of the country.

In the five years, 1913–1917, inclusive, the expenditures from the Benefit Funds of the Bell companies have aggregated $7,617,375. At December 31, 1917, the reserves for these Benefit Funds aggregated $9,219,143. Some figures for the year 1917 follow:

Pensions. Three hundred and fourteen former employees were on the pension rolls at the end of the year 1917, a net increase of thirty during the year. The average pension paid was $40 per month.

Sickness. The number of cases of sickness which occurred during 1917 among employees eligible to benefits under the Plan was 19,430, an increase of 670 cases over the previous year. This increase is small when the growth of the system is taken into account. The average period of disability for cases completed in 1917 was 39 days and the aggregate sickness benefits paid were $1,100,368.

Accidents. 10,732 work accidents occurred during the year, over one-third of which involved no disability beyond the day of the accident and three-fourths of which did not involve disability of more than 7 days. The frequency of serious accidents was less in 1917 than in 1916. The total benefit payments on account of accidental injuries were $600,737, including $155,329 for medical attention, hospital care, etc.

Death Benefits. $144,019 was paid in death benefits during the year (excluding accident cases included above) to the dependent relatives of 170 employees who at their death had been in service five years or more. Burial expenses for 33 who left no dependents amounted to $5,917, a total of $149,936.

Summary. The total amount of the payments from the Benefit Funds during the year 1917 was $1,997,359, of which $333,891 was provided by interest on the funds, the balance being appropriated by the companies. The companies also bore the expenses of administration of the Plan.

As in previous years, financial assistance has been given in many cases of disability which did not come wholly within the provisions of the Employees' Benefit Plan. The cost of this assistance was $182,049.

EMPLOYEES' MILITARY AND NAVAL SERVICE.

In last year's report it was stated that employees of the Bell System who, on June 18, 1916, were members of the National Guard or Naval Militia and were called into service and employees who enlisted subsequently, were allowed full pay during the first three months of their absence, and thereafter full pay less the amounts they received from the Government. Payment was continued up to July 1 to these employees and also made to the employees who, on March 27, 1917, were enlisted in the National Guard or Naval Militia, or were otherwise under oath to present themselves for active military service. Since that date allowances have been made to dependents of these and other employees of the Bell System called into military service who, upon investigation, were found to be in need of assistance; these allowances will be discontinued as soon as regular monthly payment of family allowances authorized by Congress can begin.

The total allowances made during the year by the Bell System, as above stated, aggregated $612,554. At the end of the year the number of employees on leave of absence for military, naval and other Government war service, was 7,002; this represents about 9 per cent. of the male force, and 25 per cent. of the male force registered under the Selective Service Law.

SUMMARY OF THE ACTIVITIES OF THE BELL SYSTEM IN CONNECTION WITH GOVERNMENT MATTERS.

The officials of the Bell System, recognizing the necessity of telephone service in the mobilization of the resources of the nation, for over a year prior to the declaration of war, made studies of preliminary plans to meet war conditions.

What could be done to meet the problem of national defense, was demonstrated in 1916 during a mobilization of our communication facilities conducted by a staff of the system at the request of the Secretary of the Navy and in co-operation with naval officers under the command of Admiral W. S. Benson, Chief of Naval Operations.

For three days, during which war conditions were simulated as far as possible, the Navy abandoned all other forms of communication between the Navy Department at Washington and the navy yards and naval stations in the continental United States, and utilized the Bell System for telephone and telegraph communication by wire with all of the naval forces in that territory. During the period of mobilization, naval officers and the telephone officials assigned to the work were on duty day and night, and at all times could obtain instantaneous telegraph or telephone communication with any point involved in the mobilization. The Secretary of the Navy himself conversed with a number of the principal naval stations, and the Admiral in command personally talked to the commanding officer at all of the naval stations on the Pacific Coast from Bremerton, Washington, to San Diego, California, and to the navy yards and naval stations on the Gulf and Atlantic Coasts and on the Great Lakes.

While the mobilization was intended primarily to test the efficiency of the wire system in time of war, an interesting test of wireless telephony was made, *i.e.*, transmission by wire to wireless stations, automatically transferred to wireless, or vice versa.

The Secretary of the Navy, from his desk in the Department at Washington, talked with Captain Chandler on the battleship *New Hampshire* at Hampton Roads.

Under orders, the *New Hampshire* proceeded to sea, as far as the Southern Drill Grounds and returned, reporting its position by telephone every hour to the Department at Washington.

Captain Bennett, in command at the Mare Island Navy Yard on the Pacific, conversed with Captain Chandler on the *New Hampshire*, which was at that time in a storm on the Atlantic. This conversation was transmitted over the transcontinental telephone wire circuit from Mare

> Island, California, to the radio station at Arlington, Virginia, and there transferred automatically to the wireless from Arlington to the ship at sea, the return conversation taking the opposite course.

Immediately upon the declaration of war Washington became the center of great activity. Under authority of and co-operating with the Council of National Defense and military and naval officers, effective and harmonious methods were worked out by the Bell System, by which it has been able to meet the unusual requirements.

The following is a short summary of the resulting activities of the Bell System.

Precedence was established throughout the system for all Government service, and at Washington and over the entire country for the maintenance of existing Government facilities and the construction of the numerous additional ones required.

Special attention is being given to, and special investigation is being made of, this service, that it may be always available and as far as possible provided in advance of the need. For this, elaborate plans had to be worked out, special operating methods devised and some twelve thousand toll operators specially trained. Work has been done in a few weeks that ordinarily would have taken several months.

In times of peace telephone traffic flows along the channels of commerce. War has made new centers and new routes. Washington has become the center of a vast new traffic. The growth during the last few months in the toll telephone service centering at Washington has been greater than during the eight previous years.

To meet this increased toll business new facilities centering at Washington have been provided; the number of lines radiating from Washington has been increased many times and further increases are still being made. There is also nearly completed between New York and Washington a new underground cable of the latest design, containing 80,000 miles of wire. This will be an important addition to the underground facilities connecting the seaboard cities from Washington to Boston.

Five times already have the toll switchboards at Washington been increased and the plans are made and material ordered for additional increases. Notwithstanding the rapid growth of this service, and the scarcity of labor, material and transportation, a satisfactory service has been provided and maintained.

Local traffic of the Washington telephone exchange increased many times, making necessary one entirely new central office and substantial additions to all the existing ones. Large additions to the underground wire system have been and are still being made.

To meet the necessity for trained operators for both local and toll traffic, hundreds of operators have been brought from other cities. Large additions to the training schools have been established, where operators are being trained as fast as they can be secured.

To supply departmental and inter-departmental service in Washington, a large amount of underground cable has been laid directly connecting different governmental and departmental buildings widely separated. Existing private switchboard and other equipment has been thoroughly gone over and large additions made. Still larger additions are now under way. Several of the departmental multiple switchboards are large enough for a city of one hundred thousand population. The new and temporary buildings which have been and are being erected are being equipped with complete telephone systems and connected with other department buildings and the local system. For use in the National service 15,000 miles of toll wire and 27,000 miles of circuit for telegraph use have been taken from commercial service and devoted exclusively to the use of the Government.

To this work at Washington the expert and technical telephone men of the Washington system, as well as many others from all parts of the country, have devoted their entire time.

In other sections it has been necessary to provide telephone facilities and toll connections for the National Army Cantonments, National Guard Camps, Division Headquarters of the Army and Navy, Army Posts, Navy Yards, Aviation Fields, Supply, Quartermasters' and Training Camps, munition manufactures, ship-building yards, and various Federal and State camps and headquarters located in different parts of the country.

A full description of this work would require long lists and detailed statements of large undertakings at many hundreds of places in all parts of the country.

Many of them are located far from existing facilities and in sections heretofore not requiring extensive telephone facilities, and some of them are the equivalent telephonically of cities of thirty to forty thousand inhabitants.

This new traffic has necessitated trunk lines from all such points to adjacent cities, many new toll lines or additional wires on existing lines of the Bell System (including additional circuits on the transcontinental line), and in many local exchanges additions to the local switchboard facilities, wire system and operating force.

At the request of the United States Coast Guard complete plans for the enlargement of the Coast Guard telephone system were made, and the work of reconstructing and extending these lines done. This work includes connecting about 100 lighthouses and 200 coast guard stations, the laying of some 300 miles of submarine cable, the construction of over 650 miles of pole line and the stringing of over 1,200 miles of wire. The Coast Guard system is now connected with the Bell System.

The Bell System has been called upon to manufacture and furnish a very large amount of telephone equipment and supplies of every kind, including many special devices for the Army and Navy, both for use in this country and by the American Expeditionary Force in France.

The Signal Corps of the Army required a large force of men specially trained in telephone and telegraph work. From the Bell System some fourteen battalions of picked officers and men have joined this branch of the service. Many of these are already over the water, and those not needed for service in this country will soon join them. The training they have received in the Bell System together with the intensive training under officers of the regular army in camps has made these men especially efficient, and we are gratified to know that they receive many commendations.

We have assisted in the organization of a Division of Research and Inspection for the American Expeditionary Force in France, recruited largely from the scientific staff and laboratory forces of the Bell System.

Technically trained men have been detached from our service for special service in the Army and Navy. Over 150 men have been admitted to Officers' Training Camps, and 2,000 employees are members of the National Guard or Naval Militia and are in active service.

The Bell System has a total of approximately 7,500 employees now engaged in serving the country abroad and at home in various activities incident to the war.

These large deductions from the limited supply of trained men available for telephone work have come at a time when the system has had to meet the most extraordinary demands ever put upon its service.

REPORT OF THE AMERICAN TELEPHONE AND TELEGRAPH COMPANY.

The statement of earnings of the American Telephone and Telegraph Company represents, in addition to the net receipts of the long-distance lines, only that part of the earnings of the Bell System which is received by the American Telephone and Telegraph Company, out of the divisible surplus of the associated companies from operation, as interest or dividends on money advanced by the Company to finance the associated companies, or as payments by the associated companies to maintain the central administration.

The disbursements of dividends and interest represent the charges on the securities issued by the Company to finance the associated companies and the long-distance lines.

The actual financial and statistical statements of the telephone service of the Bell System, that is, revenue and expense, are shown in the report of the Bell Telephone System preceding. See page 4 and subsequent pages.

EARNINGS.

The net earnings of the American Telephone and Telegraph Company for the year were $48,940,466.63, which is $4,197,090.18 more than for the previous year. These results are after making provision for the federal income and excess profits taxes payable in 1918. The interest charges were $10,469,360.47 and the dividends at the regular rate of 8 per cent. per annum were $32,481,613.76. Of the resulting balance there were carried to Reserves $2,500,000 and to Surplus $3,489,492.40.

BALANCE SHEET.

The balance sheet of the American Telephone and Telegraph Company is given as usual at the end of this report. By comparison with the previous year's balance sheet it will be seen that the investment in stocks, bonds and notes of associated companies increased $88,455,220.69; and permanent plant increased $12,975,353.09, current assets decreased $19,023,302.40 and cash decreased $42,173,259.19.

Of the increase in stocks, bonds and notes, $14,639,700 represents the amount subscribed for preferred stock of the Western Electric Company, Incorporated.

The account "Trustees—Employees' Stock—Purchase Plan," $4,611,478.63, represents the balance on advances made to the Trustees to acquire stock which they sold to employees on the plan of easy payments explained in previous reports, less payments on that account received from employees.

On the other side, under liabilities, the increase in capital stock outstanding of $40,037,600 represents new stock offered shareholders of record December 11, 1916, and stock issued in exchange for convertible bonds. Capital Stock Instalments of $17,524.50 represent payments on account of subscriptions not then paid in full. The total indebtedness decreased $8,422,208.30 during the year.

There was a total increase in assets of $40,234,012.19, against which was a net increase in capitalization and indebtedness of $31,600,897.20, showing a net improvement in the Company's financial position of $8,633,114.99, which is represented by the increase of that amount in surplus and reserves.

CAPITAL STOCK AND BONDS.

During the year Capital Stock increased $40,037,600. Of this $39,106,000 was issued under date of November 1, 1917, for cash at par, in accordance with the terms of the offer to stockholders of record at December 11, 1916. The balance of $931,600 of stock issued was in exchange for convertible bonds.

$729,300 of 4½ per cent. convertible bonds were converted into stock during the year at the ratio of $120 of bonds, or $100 of bonds and $20 of cash, for one share of stock. There remained outstanding at the end of the year $13,160,800 of these bonds out of a total of $67,000,000 issued in 1913.

During the year $284,000 of the 4 per cent. convertible bonds were exchanged for stock at a slightly changing ratio, averaging about $125 of bonds for one share of stock. At the end of the year $2,843,000 of this issue remained outstanding. The right to convert these bonds into stock expired at the end of February, 1918.

Of the $50,000,000 4½ per cent. coupon notes of this Company, or of the associated companies bearing its endorsement, maturing February 1, 1918, $31,612,000 had been acquired by this Company at the end of 1917. The Company had also acquired the additional $1,610,000 of associated companies' notes endorsed by it maturing February 1, 1918, and mentioned in last year's report. In order to reimburse its treasury in part for the subscription for $14,639,700 Western Electric preferred stock and the purchases of coupon notes, and to provide funds for the payment of the balance of $18,388,000 coupon notes on February 1, 1918, the Company, in January of this year, sold with its endorsement $40,000,000 6 per cent. notes of the associated companies dated February 1, 1918, and maturing February 1, 1919.

There are also outstanding, endorsed by this Company, $11,100,000 notes of the 195 Broadway Corporation, due July 1, 1920, which corporation owns the real estate where the Company's offices are now located.

The total outstanding capital stock and bonds of the

American Telephone and Telegraph Company at December 31, 1917, were as follows:

Capital Stock	$435,641,200
4% Collateral Trust Bonds, 1929	78,000,000
5% Collateral Trust Bonds, 1946	79,195,500
4% Convertible Bonds, 1936	2,843,000
4½% Convertible Bonds, 1933	13,160,800
5% Western Telephone and Telegraph Company Bonds, 1932, guaranteed	9,985,000
Total	$618,825,500

For the $435,641,200 capital stock $470,613,540.94 has been paid into the treasury of the Company; the $34,972,340.94 in excess of par value represents premiums on stock which are included as part of the Company's surplus.

All discounts on bond and note issues are deducted in determining the net surplus as shown in the balance sheet.

The number of shareholders, not including employees purchasing stock under the plan of easy payments, was 86,599 on December 31, 1917, and shows an increase of 16,044 during the year. That the distribution continues to be more general appears from the following:

77,258 held less than 100 shares each;
8,917 held from 100 to 1,000 shares each;
389 held from 1,000 to 5,000 shares each;
18 held 5,000 shares or more each (omitting brokers, holders in investment trusts, etc.).

Of the holders of less than 100 shares each,
21,683 held 5 shares or less each;
59,280 held 25 shares or less each.

The average number of shares held was 50, or deducting the stock held by Trustees under the Employees' Stock Purchase Plan the average was 49 shares.

A majority of the Company's shareholders are women. Less than 4 per cent. of the stock was at December 31st in the names of brokers and less than 2 per cent. of all the stock is held in Europe.

To the 86,599 stockholders of record shown above there should be added some 33,000 employees of the Bell System in all parts of the country who are paying for stock out of their wages at the rate of $2 per share per month. (Several thousand employees have already paid in full for their stock, and are now stockholders of record.) Counting these and also those persons whose stock is held for them in investment trusts and the like, there are probably at least 130,000 actual owners of stock in this Company.

ENGINEERING.

The Engineering Department of the American Telephone and Telegraph Company is responsible for the technical methods and developments of the Bell System, including development and standardization in transmission and in apparatus, in engineering methods and in the materials and methods of construction. In addition, the Department performs specific engineering work for the associated companies at their request, and also furnishes them with expert consulting advice on all engineering subjects pertaining to their work.

From the beginning of the business the associated companies, operating in the field, have needed engineering information, help and technical advice. This Department has furnished it and consequently the associated companies themselves have not been required to undertake this broad technical development and standardization.

At the beginning of the last decade the limits of telephone transmission were from 1,000 to 1,200 miles when open wires could be employed. The range of open wire transmission has been so greatly extended that to-day it is practicable to give telephone service between the extreme limits of the continental United States over distances of 4,000 miles and upward, and to give this service without employing over-head wires any larger than were the wires employed to give the more restricted service of ten years ago. These methods have also greatly improved the service over shorter distances. Some of the most important of these developments were first tried out on the transcontinental telephone circuits, which extend between the Atlantic and Pacific Coasts and were opened to commercial service in 1915.

Equally important results have been obtained by the application of these developments to underground and aerial toll cables. While ten years ago the practicable limit of cable transmission was about 100 miles, as exemplified in the telephone cable which had been placed between New York and Philadelphia, to-day a successful telephone cable is working between Boston and Washington, a distance of about 450 miles. This cable is giving between those points service better than was given over the 100-mile cable ten years ago. By our most recent improvements telephone cables of 1,000 miles are now practicable.

We have successfully transmitted speech by means of radio communication across the Atlantic Ocean from Washington to Paris, and from Washington across the North American Continent and over the Pacific Ocean as far as Hawaii. We have also established telephone communication with a battleship at sea, in which the land lines of the Bell System were used in combination with our radio telephone system, which bridged the gap between the seaboard and the ship. Our studies, based upon these and many other tests, have indicated that the true field of wireless telephony is to extend the wire system to points where telephone wires cannot be constructed and maintained, rather than for uses where wire systems can be employed.

During the past ten years there has been a great increase in the number, extent, voltage and current of power and lighting circuits in all parts of the country. Therefore, telephone engineers have been confronted by the difficult and constantly growing problems of disturbances in neighboring telephone circuits producing noise, interference to signaling and, in extreme cases, hazard. The electrification of trunk line railroads, which has been largely a development of the last ten years, has brought up peculiarly difficult problems of this kind. Plans have been worked out, as far as practicable, for minimizing such disturbances by rearrangements of our wires and modifications in the apparatus associated with them. But in many cases the disturbances have been such that a solution was not to be found by treating only the telephone system. It has been necessary, therefore, to work with many electric light, power and railway interests, and manufacturers of electrical power apparatus, and to arrange with them to design and operate their systems so as to reduce the disturbances at the source. In cases where State Commissions have undertaken to prepare rules dealing with such interferences, our engineers have assisted in every practicable manner.

In 1908 the largest number of telephone wires that it was feasible to place in a cable sheath was 1,200. By improvements, resulting from long-continued experiments, we succeeded, in 1912, in making available for the use of the associated companies, cable containing 1,800 wires. Still further improvements enabled us, in 1914, to produce cable containing 2,400 wires.

The application of new preservative methods and materials for the purpose of increasing the life of poles has been a matter of constant experimentation by us. More than a million poles treated with preservative have been placed in the Bell plant.

During the past ten years the department has issued over 21,000 circular letters, specifications, hand books and standard drawings describing improved methods and materials. Inspection methods have been carefully supervised for all construction materials entering into the plant.

There is no more important part of the telephone system than the transmitter and the receiver and their associated apparatus located at the subscriber's station. During the past ten years over 1,000 changes have been made in the design and materials of the substation equipment, each of which has made for improved transmission or better and more dependable service, and as far as is consistent with these, for reduced costs.

During the last decade we have made many advances in all phases of telephone switchboard development. In switchboards we have devised during the past ten years over 30,000 new arrangements, each of which has resulted in improved service, lower operating costs, or both. This number does not include large numbers of minor manufacturing changes.

The Engineering Department has given advice to the associated companies on all major projects involving new building construction and new switchboards to be located therein, the total first cost of which is over $100,000,000. Thousands of other matters pertaining to buildings and switchboards have been studied and suitable advice given in each case.

We have co-operated with our Insurance Department so that at all times the Bell Telephone System employs the best and most up-to-date methods and arrangements looking to the reduction of the fire hazard to our employees and to our service. During the past ten years over 2,200 complete surveys of telephone buildings and central office equipment have been made. In addition to these 2,200 surveys, inspection reports to a total of over 31,000 have been acted upon. While fires are not always avoidable, up to the present time our system has not lost the life of a single employee due to fire or panic, and interference to service due to fires has been reduced to a very small amount. The rate of premium now paid is less than one-half of what it was eight years ago.

In giving good telephone service it is fundamental that proper traffic methods be developed and standardized. During the last ten years, all practices hitherto employed have been carefully studied, improved methods have been developed, unnecessary work has been eliminated and standard practices representing the best methods obtainable have been determined and recommended to the associated companies. This work has improved and enlarged the telephone service and has effected large economies. In all this traffic work, furthermore, the well-being of the operators themselves has been given first consideration.

In addition to the operating methods themselves, there are also many traffic engineering problems underlying the design of switchboards, arrangement of toll lines, etc., which have been studied continuously, and among other results, standard traffic engineering practices, both local and toll, have been prepared for the associated companies.

The toll line plants of the Bell System represent an investment exceeding $200,000,000. In the operation of this vast network of wires it has been possible through improved traffic engineering practices not only to effect marked improvements in the service, but also to increase the message-carrying capacity of the wires. In many instances it has been possible, without depreciating the service, to meet the increasing toll business by improved methods of working rather than by new construction.

An important feature of these improved traffic engineering methods that have been worked out by the Engineering Department is the development of methods for making fundamental plans for the toll line plants, which show the complete layout of the toll plant for a period of years in advance of the immediate requirements.

In addition to a large number of fundamental plans for small places, which have been prepared by the various associated companies, following the methods and advice of the Engineering Department, this Department has co-operated actively in making new complete fundamental plans for all large communities during the last ten years. These plans combined involve an increased development, fifteen years hence, of about 6,000,000 stations. The total additional plant investment represented by these plans, furthermore, will be more than $600,000,000.

LEGAL.

The most important change in the administration of the Legal Department during the year 1917 has been the transfer of the headquarters of the patent division of this Department from the Boston to the New York office. This was deemed desirable on account of the increasing demand for close co-ordination and co-operation between the patent division of the Legal Department and the engineers engaged in research and experimental work. A number of developments of exceedingly great practical importance to the telephone art emphasized the desirability of this readjustment at this time.

The change has been amply vindicated by the results. The patent division has been able to keep thoroughly abreast of the increased activities of the Engineering Department in the work of preserving and protecting new inventions as they have been made, and in the preparation for putting these inventions into commercial use. It has done substantial work in clearing the way for the unrestricted development of the art in the Bell System.

The satisfactory conditions with relation to commission regulation which were referred to in the report for the year ending December 31, 1916, have continued. The Company has consistently adhered to its policy of co-operation with the various commissions. The development of a sound system of regulation cannot come all at once. It must be built up gradually through the recognition and application of the fundamental legal and economic propositions which underlie it, as these propositions are presented in concrete cases coming before the commissions for their determination. In each Bell System proceeding the effort has been to present all of the facts fairly and frankly and to deduce from these facts the conclusions that are fundamentally sound. The tendency of this frankness and sincerity has necessarily been to confirm the confidence of the commissions in our representatives.

In general, the valuations which have been completed during the year have resulted in determinations which have been fair and reasonable, both from the standpoint of the Company and of the public. In every proceeding involving the relations between this Company and its associated companies under the license contract, which has reached a conclusion since the last report was made, the value of this relationship from the standpoint of its benefit to the associated companies and to the service has been recognized and the relationship has been approved.

So far as the necessary readjustments on account of the state of war now existing have come within their jurisdiction and so have involved action upon their part, the commissions have generally been disposed to recognize the abnormal requirements of the situation, and to promptly take the action needed to meet them.

During the year the Legal Department has added to its service the publication of a Bulletin of Current Decisions which is issued and sent out daily throughout the system to members of the legal departments of the associated companies, and to others. Its purpose is to furnish brief references to all current decisions of courts and commissions which may in any way affect the telephone industry. This information is given to the associated companies more promptly and in more convenient form than it can otherwise be obtained.

As a matter of courtesy, copies of this bulletin are sent to each of the commissions throughout the country. Many of them have manifested their appreciation of it by sending to the Legal Department prompt information as to their decisions so that they may be noted in the bulletin without delay.

The general relation of the Legal Department to the associated companies has been maintained unchanged. Each of the associated companies through its own legal department performs for itself the services which ordinarily pertain to such a department. The function of the Legal Department of the American Company as a part of the central organization is to act as counsel for the various legal departments of the associated companies and in this connection to afford them such aid as they may desire in the transaction of the legal affairs of the associated companies.

To this end the Legal Department publishes the commission leaflets covering the decisions by commissions and the daily bulletin to which reference has already been made, and renders service whenever counsel for the associated companies call upon it in important or unusual transactions.

The suit of William A. Read and Company was commenced five years ago and has been referred to in the last four preceding reports. An appeal is now pending from the decision of Judge Dever in the superior court of Cook County. Under the Illinois law this appeal must go first to an intermediate court and cannot be taken directly to the court of last resort in Illinois. It will be some time before an authoritative and final determination of this controversy can be had.

The arrangement with the Attorney-General of the United States which is set out in detail in the correspondence printed in the report for the year ending December 31, 1913, is still in effect. A careful adherence to it, coupled with entire frankness as to all of the matters in which the Company has been concerned, has resulted in a continued avoidance of misunderstandings and disagreements with the federal authorities.

GENERAL.

Shortly after the declaration of war, at the request of the Council of National Defense, a committee on communication was formed. Upon this committee are representatives of the various telegraph and telephone interests. By and with the consent of the respective interests a preferential service was proffered to the Government, which has worked exceedingly well. There has been entire harmony and co-operation between the various interests and it can be said that the service has been performed to the satisfaction of the Government, without any particular or serious disturbance to the general business of the country.

It was through no chance that the Bell System was prepared to meet our national emergency, not that any such emergency was anticipated. It was the result of the policy upon which the system is founded; that policy under which the Bell System has grown to what it is, the only policy which could have developed the telephone service as it has been developed. "Advance," in every meaning of the word, has been the slogan. The essential feature of the Bell service is preparedness, the essential characteristic is dependency.

No business or service analogous to the telephone service, as we know it, existed previous to Bell's invention. Not only the business, but the system, the instrumentalities, the methods of operation and the "services" had to be created and developed.

Step by step the business was built up by the construction of facilities before the "services" could be developed and their advantages demonstrated; the facilities over which "services" had first to be given, their defects pointed out and their remedies suggested.

Each step in advance was followed by improvement in quality of service and by additions to kinds of service.

To make "services" acceptable and of their greatest value the facilities for them and the availability of them had to be abundant and dependable.

To avoid piecemeal construction and frequent reconstruction, and also to anticipate and encourage growth, the future was studied, the probabilities determined, the development planned, and the construction to take care of the future was completed or partially completed in advance of the requirements.

This advance construction has justified itself many times in the past two years.

Step by step as the telephone art has been unfolded has the telephone service been developed from the limited service of an isolated local exchange to a system practically without boundaries; from an interconnecting toll service of limited extent and uncertain performance, to wire communication which is bounded only by continents, and wireless communication which is serving a great purpose in our national emergency, and which will, when normal conditions make it possible, be made world-wide in its availability.

To the engineering, manufacturing and construction organizations of the Bell System large credit is due for the progress and development which have taken place. Around these organizations are centralized and co-ordinated all the research and experimental, scientific and mechanical studies and work, all the development and practical application of new ideas, and all manufacturing and construction. From a start of modest proportions these organizations have grown apace with the growth of the system until today they are foremost in the world of their kind in size, in importance and standing of their personnel, and certainly foremost in the world in accomplished results.

The telephone service has become such a vital factor in the daily activities of the public, such a dependence of all social and business movement that nothing possible to be done to ensure good service should be left undone. Education, organization, co-operation and the co-ordination of every factor that enters into the giving of service are indispensable requirements.

To give good service, there must be three parties, the caller, the called, and the telephone system. There must be a perfect system, perfect co-operation and a co-ordination of action in which the caller and the called have their parts.

Telephone service in its relation to the public is entirely different from any other utility. In all other utilities the users are passive, accepting such service as is at their disposal. In transportation at certain hours at certain places service is at the acceptance of the public. In light, heat and water, the service is as it were on tap, the user accepts what is placed at his disposal. In the mail service the letter is deposited and sooner or later delivered at its destination. In neither case does the user actively participate in rendering the service.

The telephone system furnishes the transmission of the speaking voice. It puts the caller in connection with the distant party; the connection can be made only after both parties are present at their telephones. If the party called fails to respond, if the party calling fails in any part, keeps the connection waiting after being made, if the parties have not good telephone voices, the utmost perfection on the part of the telephone system will not overcome their shortcomings; nor will absolute perfection on the part of the users give good telephone service if there is imperfection in the transmission facilities.

This necessity of co-operation, of the co-ordination of the parties speaking and the system, is no creation of the system, it is the inherent characteristic of the service which constitutes its greatest value. There is no form of communication so complete, so satisfactory, as personal conversation. All that the telephone system does is to extend the range at which personal conversation can be carried on by making a path for the voice over the wires, by supplying in effect a direct circuit from any one of the hundreds or thousands, or hundreds of thousands of subscribers in any exchange territory to any other in the same exchange territory, or to any of the millions within range of speaking transmission.

In any exchange the circuits radiate from a particular position of some particular operator at a switchboard in a central office. That immediate service may be given, every other circuit in that exchange and every telephone circuit on the whole system must be within reach of every operator. This necessitates an involved, intricate, bewildering arrangement of trunk and connecting lines, signals, switches, connecting cords, magnets, relays, secondary switches, selective devices, repeaters, amplifiers, and operators, automatically, as it were, set in motion by each call.

Such are the conditions under which all telephone service is given; the larger the exchange, the greater the distance, the greater are the complications.

Every word or act of every individual, instrument, current or device concerned in the operation must be regulated and controlled. Employees and apparatus must act automatically, instinctively, and be free from all other obligations or duties. For these reasons all conversation or inquiry from subscribers not required by or pertaining to a particular connection, is referred to special employees whose sole duty it is to take up all such questions. To attend to such matters would burden and divert the line operators' attention and delay other subscribers. With these conditions in mind it is easy to understand the absolute necessity for a strict observation of the rules of standardization, the subordination of the individual to rule and regulation, and the absolute impossibility of having any outside or independent control of the operating force. Loyalty to the service and to the public must come first.

Some may think that this destroys individuality and initiative; quite the contrary. Every act being thoroughly standardized becomes instinctive, does not exhaust and leaves the mind active and observant. This is the reason why there are so many instances of telephone operators rendering incalculable service by calling attention of the proper authorities to departures from the standard, to irregularities that indicate something unusual. It is a well established fact that there are no other employees in the world who so quickly and efficiently respond in emergency and do the right thing and do it from no other impelling cause than a conception of duty.

Service such as our public demands could not be given by or through a number of separate systems without close and dependent relations. Imagine the chaos of the employees of each separate company neither owing nor owning any allegiance, except to their own system and their own subscribers, fighting for precedence and for circuits.

The problem of wire communication is quite different from that of any other utility. To be understood, its inter-relations, its relations to the Government and to the public must be made clear.

There are for telegraph and telephone operation entirely separate and distinct systems, each covering the entire country with close working arrangements beyond the borders. Each of these systems is an aggregation of separate sectional systems which by contractual relations, common ownership or connecting contracts has been brought into one operating system under common control. Each of these systems forms a universal, interdependent, intercommunicating system; over the telegraph system any telegram can be transmitted, and over the telephone system personal conversation can be had between practically any two points in the United States and Canada.

Besides these there are other telephone and telegraph systems of greater or less extent, which in the territory they serve are of equal importance and efficiency.

The great advantage of any comprehensive system is the ability to give continuous service from origin to destination and to route traffic so as to avoid any local congestion or the more serious delays caused by storm or flood.

The *economic advantage* to come from the merging of the telephone and telegraph systems, as we have advocated, could come only through the *gradual* concentration of plant upon common routes and ultimate utilization of the lines for both purposes. To use the telegraph systems for telephone purposes, the lines would have to be *substantially reconstructed.* This could be done under normal conditions, as *maintenance, depreciation and obsolescence called for reconstruction,* without additional cost and would save in capital investment to the extent of the plant utilized. To do this in any way which would give immediate service or service in the near future would far exceed in cost, time and labor, any advantage to be gained; therefore would be unwise, and under present conditions prohibitive because of interference with operation. The economies would be plant economies and the advantage to the public would be only such as would arise in the development during slack periods of new deferred services at lower rates.

No matter how closely the systems might be merged, the telephone and telegraph *would require separate and distinct service-operating organizations.* There is nothing in common in the two systems except the wire plant.

The situation of the telegraph and telephone services is in this respect entirely different from that of the transportation companies. The transportation facilities of the country are operated by a large number of independent companies each controlling a system independent of all others. A number of them cover large sections of the country, and in many instances serve more or less the same sections of the country, but none of them gives continuous service from origin to destination to more than a part of its traffic.

These transportation systems, due to increase in wages and costs of material, have been laboring under the disadvantage of increasing cost of operating, which has reduced the net operating revenue in spite of the tremendous growth of business. In consequence, the traditional and customary high credit which our railroad securities enjoyed has been so impaired in recent years that few of the systems have been able to procure the capital with which to make additions and extensions to plant and equipment needed to meet the growing demands of a growing country.

Insufficient or ineffective utilities are directly and indirectly costly to the public. The experience the country is now passing through only emphasizes this oftentime overlooked and frequently ignored economic law.

Although the railroad systems were quick to respond when the national emergency arose, it is common knowledge that transportation has been seriously handicapped. There is little doubt that had the railroad systems been able to provide fully in the years immediately past for adequate maintenance, depreciation, and for normal growth and expansion, as they had been able to do before the great increases in operating expense had impaired their credit, they would have been able to take care of the emergency traffic so efficiently that the damage and loss would have been almost negligible.

Our national emergency together with the vast increase in general business has made almost overwhelming demands upon the facilities of intercommunication, *i. e.*, transportation and communication, of our country.

The demands upon our service the past two years have been unprecedented. Surplus facilities had been practically exhausted by the end of 1916, but the preparation in plant and equipment and the training and education of additional operating forces in anticipation of the demand for the year 1917 enabled the system to respond readily to the demands of the Government, and with very little retardation or delay to the demands of the public.

To appreciate the difficulties of quick response to sudden emergencies, the *inelasticity* of telephone service must be understood. To meet emergencies, over any railroad system additional trains can be passed, additional cars can be put on trains, and all know that the capacity of an ordinary car is very elastic; there are few street cars which pass your doors which would not hold an additional passenger. The quantity of electricity or gas which can be passed through the mains and the number of lighted lamps can be largely increased, though the light may sometimes be dimmed. In the telegraph the messages are handed in and are transmitted in due course by the employees.

In the telephone service each circuit is exclusive in its use. Only one conversation can be had over any circuit at a time; it occupies that circuit of two wires exclusively from end to end.

The only elasticity in the telephone service is in an abundance of facilities to take care of the greatest possible business with the least possible delay.

While elasticity in other services is of great advantage in emergency, overburden is neither economical to the public nor to the companies as a permanent condition. For economic operation, plant and traffic must, under the same conditions, bear a nearly constant relation.

CONCLUSION.

Only under stress of emergency is the absolute, inherent strength of individuals, policies or laws shown or developed.

Business will adjust itself to any condition, or to variations of condition which come gradually.

In this time of great national emergency we find our country waking up from the delusions, and breaking loose from and disregarding many of the economic fallacies, which have been imposed upon the community by misled and mistaken public opinion.

How much of a revision of the laws or of their interpretation pertaining to all industrial, commercial and utility enterprises under which we are now working will be made, time only can determine. There is no question, however, but that public opinion, the final resort and arbiter, is changing very rapidly upon these questions. There is nothing so convincing as "example" or "exhibit" backed by complete, clear and full information; argument is then unnecessary.

There is, however, a large and serious public, which genuinely fears the evils of that combination or monopoly essential to the highest efficiency and most economical operation. The traditional fear of exacting corporations arrogantly disregarding public feelings or opinions is still controlling in their minds. No service, however beneficial, rendered to the public will balance an arrogant, high-handed manner of administering it.

This is our reason, not excuse, for again repeating much that we have many times said about the fundamental policies which underlie the development of the Bell System, and which are in our opinion indispensable to that efficient and sufficient public service necessary to future progress and the continuity of public prosperity.

The underlying principles of public service which should guide in its regulation and control are:

Any particular utility "Service," which to be complete depends for its performance upon the facilities of several independent or distinct systems, over or by which part of the particular "Service" is performed, can be more efficiently and economically performed if all the systems participating in such "Service" are combined into one co-operative, co-ordinated system, operating under one policy. Such a system should be co-extensive with the territory over which the service extends.

When any system is giving or can be made to give a complete, sufficient and efficient "Service," it is uneconomical and both directly and indirectly detrimental to the best interests of the public to allow any duplication or partial duplication of that system.

We have repeatedly and constantly contended that competition, so far as the public utilities are concerned, is costly, unsatisfactory, undependable. That as an incentive to development or improvement it has passed its period of usefulness, if indeed it ever had any.

We have also contended with equal constancy, that with combination of like utilities under proper control and regulation the service to the public would be better, more progressive, efficient and economical than competitive service given by the separate systems.

Without entirely abandoning "competition," "control and regulation" have been established.

These two are absolutely inconsistent. If the public is getting the fullest advantage of control and regulation, no competition except destructive competition can exist. No *properly* regulated charge for utility service could be high enough to cover the cost of duplication and the increased cost incident to competition. Competition involves duplication of plant, equipment, administration and investment, with the consequent duplication of overhead charges, operating costs, and the greatly increased commercial expenses peculiar to competition and necessary to maintain the existence and continuity of the enterprise, to self-preservation.

Under proper control and regulation, complete, co-extensive competition could not exist. The charges allowed for service would not be high enough to support complete, co-extensive duplication, let alone attract it. Rates are necessarily based on average costs. Partial competition selecting always the choice parts of the territory without assuming obligations as to the whole, shares all that is beneficial without assuming any of the burden.

Regulation and control should not permit partial duplication.

That all may be able to benefit by, as well as contribute toward, the prosperity and well-being of the whole, each individual must have all the material comforts and enjoyments of life so far as possible. As a considerable part of any public service must be rendered either directly or indirectly without profit, such service must be maintained by the system as a whole, not alone for the advantage of the utility, but upon the well-founded principle that public service must be maintained, *not* by the public

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as a whole, *but* by the beneficiaries as a whole; the cost of such service to be distributed as equitably as possible according to use and benefit.

If any other principle than this were to govern, fully half of the area of this country would be without transportation, telegraph or telephone, and many sections of every city without street cars, gas or electric light.

Control and regulation should provide the best service at the lowest possible cost. It should eliminate duplication of plant, encourage combination so far as combination produces efficiency and economy, and encourage development, even that extension of service toward which the more remunerative part of business must be contributory.

Control and regulation should be "control and regulation" and not operation. It should not handicap initiative and enterprise by too great limitation of that possible reward which alone makes risk attractive. It should be sufficiently liberal to encourage development of latent resources, and not so restrictive as to impede or retard the extension and expansion needed to meet the wants of a growing country. It should allow a sufficient revenue to provide fully for operation and maintenance, depreciation, development and obsolescence, for all reasonable overhead and capital charges, and leave a surplus sufficient to establish such credit as will make it possible to provide capital for expansion and extension at reasonable cost, and at all times.

Only through the application of these principles can the public get the best service. Best service can be rendered only by prosperous enterprises. Any contest for corporate existence consumes the capital and human energy which could be better devoted to quality and economy of service.

Any public control and regulation that does not do this is in the end destructive, not constructive. It is not even protective, for the public will some day realize that inadequate, inefficient public service is tremendously costly —directly, in the lack of value; indirectly, in discomfort and inconvenience to the public and in the insidious deterioration of prosperity and progress, of the individual and of the community.

To those who look upon government operation as the only remedy for existing or fancied evils of private operation the following assumptions, based on experience, are respectfully submitted.

If from the net revenues of private operation are deducted all paid in taxes, directly by the corporation and indirectly on the securities by the holders, the balance would be no more than sufficient, if sufficient, to pay government rates of interest on the actual investment.

The financial credit, that is the balance sheet, and the service credit, that is the dependence of the employee on his employment and the sufficiency and efficiency of service, are the controlling factors in private enterprise.

The financial affluence and credit of the Government and its immunity from direct control, and the lack of dependence of the Government employee upon his employment, are inseparable, inherent and preponderant factors in government operation. Therefore the desirable factors of economic and efficient operation are wanting.

Whatever can be done by the Government through direct operation can be done more certainly through control and regulation of private operation, thus combining the potency of the sovereign with the initiative and interest of the subject.

The attention of the public interested in a proper telephone service is respectfully called to these general statements, which should be fully considered, appreciated and understood.

For the Directors,

THEODORE N. VAIL,
President.

BELL TELEPHONE SYSTEM IN THE UNITED STATES

CONDENSED STATISTICS

	Dec. 31, 1895.	Dec. 31, 1900.	Dec. 31, 1905.	Dec. 31, 1910.	Dec. 31, 1915.	Dec. 31, 1916.	Dec. 31, 1917.	Increase
Total Miles of Pole Lines....	78,203	131,538	213,233	282,877	330,602	337,289	351,222	13,933
Miles of Underground Conduit (length of single duct)..				30,165	44,510	47,120	51,208	4,088
Miles of Underground Wire....	184,515	705,269	2,345,742	5,992,303	10,536,837	11,468,525	13,451,121	1,982,596
Miles of Submarine Wire......	2,028	4,203	9,373	24,636	36,314	41,172	46,868	5,696
Miles of Aerial Wire.........	488,872	1,252,329	3,424,803	5,625,273	7,932,394	8,340,618	9,112,498	771,880
Total Miles of Wire........	675,415	1,961,801	5,779,918	11,642,212	18,505,545	19,850,315	22,610,487	2,760,172
Comprising Toll Wire.........	215,687	607,599	1,265,236	1,963,994	2,453,483	2,682,910	3,088,808	405,898
Comprising Exchange Wire....	459,728	1,354,202	4,514,682	9,678,218	16,052,062	17,167,405	19,521,679	2,354,274
Total..................	675,415	1,961,801	5,779,918	11,642,212	18,505,545	19,850,315	22,610,487	2,760,172
Miles of Phantom Circuit.....				115,506	196,841	221,994	281,016	59,022
Total Exchange Circuits......	237,837	508,262	1,135,449	2,082,960	3,174,271	3,459,069	3,706,682	247,613
Number of Central Offices.....	1,613	2,775	4,532	4,933	5,300	5,397	5,676	279
Number of Bell Stations (Owned)	309,502	835,911	2,282,378	3,933,056	5,968,110	6,545,490	7,031,530	486,040
Number of Bell Connected Stations.................		20,000	246,337	1,949,663	3,183,111	3,301,702	3,444,148	142,446
Total Stations............	309,502	855,911	2,528,715	5,882,719	9,151,221	9,847,192	10,475,678	628,486
Number of Employees........	14,517	37,067	89,661	120,311	156,294	179,032	192,364	13,332
Number of Connecting Companies, Lines and Systems...				17,845	28,306	30,358	31,428	1,070
Exchange Connections Daily...	2,351,420	5,668,986	13,543,468	21,681,471	25,183,799	28,530,073	30,845,153	2,315,080
Toll Connections Daily.......	51,123	148,528	368,083	602,539	819,030	889,860	1,009,205	119,345

BELL TELEPHONE SYSTEM IN THE UNITED STATES

ALL DUPLICATIONS BETWEEN COMPANIES EXCLUDED

COMBINED BALANCE SHEETS AT FIVE YEAR INTERVALS, 1885-1917

	Dec. 31, 1885.	Dec. 31, 1890.	Dec. 31, 1895.	Dec. 31, 1900.	Dec. 31, 1905.	Dec. 31, 1910.	Dec. 31, 1915.	Dec. 31, 1917.
ASSETS:								
Contracts and Licenses.	$16,732,100	$18,925,700	$20,005,300	$ 14,794,300	$ 13,313,400	$ 2,943,381	$..........	$..........
Telephone Plant......	38,618,600	58,512,400	87,858,500	180,699,800	368,065,300	610,999,964	880,068,520	1,064,892,710
Supplies, Tools, etc....	348,500	1,021,800	1,810,000	6,464,400	11,069,500	20,987,551	15,951,582	31,543,745
Receivables..........	1,450,900	1,761,600	3,746,600	13,644,000	26,220,800	26,077,802	43,518,625	42,472,942
Cash...............	1,792,600	1,183,300	2,484,100	3,223,000	11,005,900	27,548,933	45,716,330	35,986,840
Stocks and Bonds.....	1,138,800	2,697,400	4,480,500	11,400,400	23,041,200	64,766,089	72,652,646	101,607,231
Total............	$60,081,500	$84,102,200	$120,385,000	$230,225,900	$452,716,100	$753,323,720	$1,057,907,703	$1,276,503,468
LIABILITIES:								
Capital Stock........	$38,229,200	$43,792,800	$ 57,462,700	$130,006,900	$238,531,100	$344,645,430	$ 440,711,200	$ 505,403,777
Funded Debts.......	367,400	6,473,100	10,074,100	44,137,900	93,079,500	224,791,696	353,236,464	407,434,080
Bills Payable........	2,618,900	1,323,000	2,000,000	7,000,000	35,000,000	42,566,943	2,404,920	4,538,565
Accounts Payable.....		3,301,100	6,138,000	13,583,300	22,407,500	21,721,125	29,039,127	46,382,252
Total Outstanding Obligations.........	$41,215,500	$54,890,000	$ 75,674,800	$194,728,100	$389,018,100	$633,725,194	$ 825,391,711	$ 963,758,674
Employees' Benefit Fund...........	....	....	....	....	....	....	9,114,329	9,219,143
Surplus and Reserves..	18,866,000	29,212,200	44,710,200	35,497,800	63,698,000	119,598,526	223,401,663	303,525,651
Total...........	$60,081,500	$84,102,200	$120,385,000	$230,225,900	$452,716,100	$753,323,720	$1,057,907,703	$1,276,503,468

BELL TELEPHONE SYSTEM IN THE UNITED STATES

ALL DUPLICATIONS BETWEEN COMPANIES EXCLUDED

COMPARATIVE REVENUE AT FIVE YEAR INTERVALS, 1885–1917

	Year 1885.	**Year 1890.**	**Year 1895.**	**Year 1900.**	**Year 1905.**	**Year 1910.**	**Year 1915.**	**Year 1917.**
Gross Revenue........	$10,033,600	$16,212,100	$24,197,200	$46,385,600	$97,500,100	$165,612,881	$239,909,649	$301,867,172
Expenses...........	5,124,300	9,067,600	15,488,400	30,632,400	66,189,400	114,618,473	173,727,892	229,332,730
Net Revenue.........	$ 4,909,300	$ 7,144,500	$ 8,708,800	$15,753,200	$31,310,700	$ 50,994,408	$ 66,181,757	$ 72,534,442
Interest............	27,700	278,700	655,500	2,389,600	5,836,300	11,556,864	18,095,643	21,820,231
Net Income..........	$ 4,881,600	$ 6,865,800	$ 8,053,300	$13,363,600	$25,474,400	$ 39,437,544	$ 48,086,114	$ 50,714,211
Dividends..........	3,107,200	4,101,300	5,066,900	7,893,500	15,817,500	25,160,786	32,897,065	36,862,582
Balance for Surplus....	$ 1,774,400	$ 2,764,500	$ 2,986,400	$ 5,470,100	$ 9,656,900	$ 14,276,758	$ 15,189,049	$ 13,851,629

American Telephone and Telegraph Company
Balance Sheet, December 31, 1917

ASSETS

Stocks of Associated Companies	$489,148,443.05	
Bonds and Notes of Associated Companies	119,786,058.91	$608,934,501.96
Telephones	$18,088,289.24	
Real Estate	509,147.42	
Office Furniture and Fixtures	255,231.46	
Long Lines Telephone Plant	65,084,543.39	83,937,211.51
Trustees—Employees' Stock Purchase Plan		4,611,478.63
Special Demand Notes	20,394,800.52	
Current Accounts Receivable	19,876,721.82	40,271,522.34
Temporary Cash Investments	$2,176,340.00	
Cash and Deposits	23,064,401.51	25,240,741.51
		$762,995,455.95

LIABILITIES

Capital Stock	$435,641,200.00	
Capital Stock Installments	17,524.50	$435,658,724.50
4% Collateral Trust Bonds, 1929	78,000,000.00	
5% Collateral Trust Bonds, 1946	79,195,500.00	
5% Western T. & T. Co. Bonds, 1932	9,985,000.00	
4% Convertible Bonds, 1936	2,843,000.00	
4½% Convertible Bonds, 1933	13,160,800.00	
4½% Coupon Notes, 1918	7,569,000.00	190,753,300.00
Dividend Payable January 15, 1918	$8,712,824.00	
Interest and Taxes Accrued, but not due	4,084,664.54	
Current Accounts Payable	3,057,981.92	15,855,470.46
Employees' Benefit Fund		2,000,000.00
Reserves for Depreciation and Contingencies		36,354,400.53
Surplus (including Capital Stock Premiums and excluding Debt Discount and Expense)		82,373,560.46
		$762,995,455.95

Note: $21,919,000.00 Coupon Notes of Associated Companies, endorsed but not owned by this Company, are not included above in either Assets or Liabilities.

H. BLAIR-SMITH, *Acting Comptroller.*

American Telephone and Telegraph Company
Comparative Statement of Earnings and Expenses

For the years 1916 and 1917

	1916.	1917.
Earnings:		
Dividends	$26,710,690.58	$28,894,254.50
Interest and other Revenue from Associated Companies	14,529,978.74	17,805,005.88
Telephone Traffic (net)	8,136,314.23	7,887,547.98
Other Sources	1,555,067.89	1,650,254.84
Total	$50,932,051.44	$56,237,063.20
Expenses	6,188,674.99	7,296,596.57
Net Earnings	$44,743,376.45	$48,940,466.63
Deduct Interest	6,730,098.86	10,469,360.47
Balance	$38,013,277.59	$38,471,106.16
Deduct Dividends	31,122,187.46	32,481,613.76
Balance	$6,891,090.13	$5,989,492.40
Carried to Reserves	$2,500,000.00	$2,500,000.00
Carried to Surplus	4,391,090.13	3,489,492.40
Total	$6,891,090.13	$5,989,492.40

H. BLAIR-SMITH, *Acting Comptroller.*

Annual Earnings and Dividends

Year.	Net Revenue.	Dividends Paid.	Added to Reserves.	Added to Surplus.
1900	$5,486,058	$4,078,601	$937,258	$470,199
1901	7,398,286	5,050,024	1,377,651	970,611
1902	7,835,272	6,584,404	522,247	728,621
1903	10,564,665	8,619,151	728,140	1,217,374
1904	11,275,702	9,799,118	586,149	890,435
1905	13,034,038	9,866,355	1,743,295	1,424,388
1906	12,970,937	10,195,233	1,773,737	1,001,967
1907	16,269,388	10,943,644	3,500,000	1,825,744
1908	18,121,707	12,459,156	3,000,000	2,662,551
1909	23,095,389	17,036,276	3,000,000	3,059,113
1910	26,855,893	20,776,822	3,000,000	3,079,071
1911	27,733,265	22,169,450	2,800,000	2,763,815
1912	32,062,945	26,015,588	2,800,000	3,247,357
1913	32,920,090	27,454,037	2,500,000	2,966,053
1914	32,334,814	27,572,675	2,500,000	2,262,139
1915	34,618,638	29,100,591	2,500,000	3,018,047
1916	38,013,277	31,122,187	2,500,000	4,391,090
1917	38,471,106	32,481,614	2,500,000	3,489,492

H. BLAIR-SMITH, *Acting Comptroller.*

ARTHUR W. TEELE, C.P.A.
JOHN WHITMORE
HAMILTON S. CORWIN, C.P.A.
HAROLD F. LEEMING, C.A.
F. R. C. STEELE, C.A.
JAMES WILLING, C.A.

CABLE ADDRESS
"DIGNUS"

Patterson, Teele and Dennis
Accountants and Auditors
New York and Boston

120 BROADWAY, NEW YORK, February 20, 1918.

MR. WILLIAM J. LADD,
MR. GEORGE B. HARRIS,
MR. LOUIS CURTIS,
STOCKHOLDERS' COMMITTEE,
AMERICAN TELEPHONE & TELEGRAPH COMPANY.

SIRS:

We have audited the accounts of the American Telephone & Telegraph Company, and of the thirty-two Subsidiary State Companies owning Long Distance Toll Lines of the Bell System, for the year 1917. These accounts are consolidated in the Balance Sheet herein referred to and published herewith.

We have not audited the books of the Associated Companies whose capital stock is carried in the accompanying Balance Sheet at $489,148,443.05. We have, however, examined the reports of these Associated Companies for the year or obtained information equivalent thereto for our purposes and have carefully considered the value at which the securities are carried on the books of the American Telephone & Telegraph Company.

We certify that the accompanying Balance Sheet and Statement of Earnings and Expenses are in accordance with the books and fairly set forth the financial condition at December 31, 1917, and the net income for the year, of the American Telephone & Telegraph Company.

PATTERSON, TEELE & DENNIS,
Accountants and Auditors.

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